REMARKS/ARGUMENTS

Favorable reconsideration of this application, in view of the above amendments and in light of the following discussion, is respectfully requested.

In the present application Claims 1-10, 12-24, and 26-30 are pending. The present response amends Claims 1, 13, 21, 24, and 26; and adds Claims 29 and 30. No new matter is introduced.[1]

The Office Action objected to the specification as failing to provide proper antecedent basis; rejected Claim 24 under 35 U.S.C. § 101 as directed to nonstatutory subject matter; rejected Claims 1-6, 12-18, 21-24, and 26-28 under 35 U.S.C. § 103(a) as unpatentable over Graf et al. (U.S. Patent No. 7,584,293, hereinafter "Graf") in view of Khun-Jush (Jamshid Khun-Jush, HiperLAN Type 2: A Candidate for Fixed Wireless Access Systems Below 11 GHz & Wireless HUMAN, A Presentation to IEEE 802.16 BWA.3 Task Group & BWA HUMAN Group, July, 11, 2000, hereinafter "Khun-Jush"); rejected Claims 7 and 8 under 35 U.S.C. § 103(a) as unpatentable over Graf in view of Khun-Jush and Kisor (U.S. Patent No. 6,104,720); rejected Claims 9 and 10 under 35 U.S.C. § 103(a) as unpatentable over Graf in view of Khun-Jush and Fant (U.S. Patent No. 6,496,509); and rejected Claims 19 and 20 under 35 U.S.C. § 103(a) as unpatentable over Graf in view of Khun-Jush and Lappetelainen et al. (U.S. Patent No. 6,671,495, hereinafter "Lappetelainen").

In regard to the objection to the specification, the specification has been amended. Accordingly, it is respectfully submitted that the objection to the specification is overcome.

In regard to the rejection of Claim 24 under 35 U.S.C. § 101, Claim 24 has been amended to recite a *tangible* computer readable storage medium. Applicants respectfully note that the amendment to Claim 24 is related to U.S. Patent and Trademark Office

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[1] Support for the amendments to Claims 1, 13, 21, 24, and 26 can be found, in a non-limiting manner, at page 7, lines 17-20 and page 14, lines 14-18 of the application as originally filed. In addition, support for new Claims 29 and 30 can be found, in a non-limiting manner, at page 13, lines 23-34 and Figure 4 of the application as originally filed.

informalities only. Support for the tangible computer readable storage medium can be found,

in a non-limiting manner, at page 10, line 4 through page 11, line 8 and page 2, lines 6-10.

Accordingly, it is respectfully submitted that the rejection to Claim 24 under 35 U.S.C. § 101

is overcome.

In regard to the rejections of Claim 1-10, 12, 26, and 27 under 35 U.S.C. § 103(a),

Applicants respectfully request reconsideration of these rejections and traverse these

rejections, as discussed next.

Applicants' independent Claim 1 recites:

> A network device for a device network, comprising:
>
> a content detection layer adapted to detect the content type of external traffic received by said network device, and to pass said external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted to handle the respective content type, and
>
> at least two content-specific convergence layers adapted to exchange network traffic with other network devices of said device network via content-specific connections, wherein said content-specific connections are adapted to the requirements of the respective content type, wherein
>
> the at least two content-specific convergence layers include a common part, *the common part being common to the at least two content-specific convergence layers,*
>
> the common part being adapted to segment a data packet of said external traffic into a plurality of corresponding data packets in accordance with an internal protocol of the device network and for each of said at least two content-specific convergence layers,
>
> the common part being further adapted to reassemble data packets according to said internal protocol of the device network and for each of said at least two content-specific convergence layers into corresponding data packets of a receiving external traffic.

(Claim 1, emphasis added). As noted, independent Claim 1 has been amended to

recite that the common part is common to the at least two content-specific

convergence layers.

The Office Action asserts on page 4, lines 4 through page 5, line 5, that Graf teaches a content detection layer and a content specific convergence layer.

Graf describes controlling the rate at which information is transmitted between access nodes separated by a core network.[2] In Graf digital information is transported to and from a mobile terminal to another mobile terminal across an ATM core network using the ATM Adaptation Layer Type 2 (AAL2) transmission protocol.[3] Graf explains that the AAL2 is divided into a Common Part Sub-Layer (CPS) and a Service Specific Convergence Sub-Layer (SSCS).[4] Graf further explains that purpose of the SSCS is to convey narrow-band calls consisting of voice, voiceband data, or circuit mode data.[5]

However, it is respectfully submitted that Graf fails to disclose *a content detection layer* adapted to detect the content type of external traffic received by the network device, and to pass the external traffic, in dependence of the detected content type, to a content-specific convergence layer adapted to handle the respective content type, and *at least two content-specific convergence layers* adapted to exchange network traffic with other network devices of the device network via content-specific connections, wherein the content-specific connections are adapted to the requirements of the respective content type. By contrast, Graf merely describes an ATM Adaptation Layer Type 2 divided into a Common Part Sub-Layer and a Service Specific Convergence Layer.[6] In other words, Graf's ATM adaption layer may serve as a single adaptation layer with a specific service sub-layer. Thus, Graf fails to disclose at least a content detection layer and at least two content-specific convergence layers, as required in Applicants' Claim 1.

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[2] Graf, Abstract.
[3] *Id.* at col. 5, ll. 33-35.
[4] *Id.* at col. 5, ll. 35-41.
[5] *Id.* at col. 5. ll. 41-43.
[6] *Id.* at col. 5, ll. 35-41.

Furthermore, the Office Action acknowledges at page 5, lines 6-15 that Graf fails to teach all the features relating to the common part. However, the Office Action asserts that Khun-Jush cures the deficiencies of Graf.

Khun-Jush describes a protocol stack and shows a diagram depicting the service specific part and the common part.[7] In addition, Khun-Jush describes a mapping between higher layer connections/priorities and DLC connections/priorities and that there is segmentation and reassembly of the data packet.[8] Khun-Jush also refers to multiple convergence layers.[9]

However, it is respectfully submitted that Khun-Jush fails to teach that the at least two content-specific convergence layers include a common part, *the common part being common to the at least two content-specific convergence layers*. By contrast, Khun-Jush merely describes a common part and a service specific part.[10]

Furthermore, M.P.E.P. § 2143.03 states: "**All** words in a claim must be considered in judging the patentability of that claim against the prior art."[11] Additionally, M.P.E.P. § 2123(I) states that a "reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments."

Accordingly, it is respectfully submitted that even if one of ordinary skill in the art were to combine Graf and Khun-Jush, the combination would fail to teach or render obvious all the features recited in amended Claim 1.

In addition, it is respectfully submitted that the cited passages of the other applied references, Kisor, Fant, and Lappetelainen, fail to cure the deficiencies of Graf and Khun-Jush.

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[7] Khun-Jush, p. 6.
[8] *Id.*
[9] *Id.*
[10] *Id.*
[11] M.P.E.P. § 2143.03 (quoting In re Wilson, 424 F.2d 1382, 1385, (CCPA 1970)) (emphasis added).

Therefore, it is respectfully submitted that Claim 1, and the claims depending therefrom, patently define over the applied references, and that the rejections of Claim 1-10, 12, 26, and 27 under 35 U.S.C. § 103(a) are overcome.

Moreover, it is respectfully submitted that amended dependent Claim 26 recites further features that patently define over the applied references. Amended Claim 26 recites in part, that a convergence layer includes drivers that are adapted to receive and send data according to different external network protocols, respectively.

As discussed above, Graf merely describes an ATM Adaptation Layer Type 2 divided into a Common Part Sub-Layer and a Service Specific Convergence Layer, and Khun-Jush merely describes a common part and a service specific part.[12]

Thus, it is respectfully submitted that Claim 26 patently defines over the applied references.

Although different in scope, independent Claims 13, 21, and 24 recite similar features to those discussed above with respect to independent Claim 1. Accordingly, it is respectfully submitted that the rejections of Claims 13, 21, and 24 under 35 U.S.C. § 103(a) are overcome at least for the same reasons as discussed above.

Furthermore, it is respectfully submitted that new Claims 29 and 30 provide additional features that are not taught in the applied references.

New Claim 29 recites that the content detection layer and the convergence layers are disposed in a protocol stack, the protocol stack comprising physical layers, data link control layers and convergence layers, and the convergence layers comprise the content detection layer and the at least two content-specific convergence layers, the at least two content-specific convergence layers being disposed between the content detection layer and the data link control layer. In reference to page 5, Khun-Jush merely depicts a protocol stack

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[12] Graf, col. 5, ll. 35-41; Khun-Jush, p. 6.

including a physical layer, a data link control layer, and a convergence layer. Thus, <u>Khun-Jush</u> fails to teach the convergence layers comprise the content detection layer and the at least two content-specific convergence layers, and the at least two content-specific convergence layers are disposed between the content detection layer and the data link control layer.

New Claim 30 recites that the at least two content-specific convergence layers are disposed at the same height in the protocol stack.
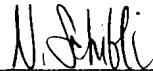
Accordingly, it is respectfully submitted that none of the cited passages of the applied references teach the features recited in new Claims 29 and 30.

For the reasons discussed above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for allowance. Therefore, a Notice of Allowance for Claims 1-10, 12-24, and 26-30 is earnestly solicited.

Should the Examiner deem that any further action is necessary to place the present application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the below-listed telephone number.

Respectfully submitted,

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